

# SEQUENCE LISTING

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agg Arg	att Ile 50	gat Asp	cct Pro	gcg Ala	agt Ser	ggc Gly 55	gat Asp	act Thr	aaa Lys	tat Tyr	gac Asp 60	ccg Pro	aag Lys	ttc Phe	cag Gln	192
gtc Val 65	aag Lys	gcc Ala	act Thr	att Ile	aca Thr 70	gcg Ala	gac Asp	acg Thr	tcc Ser	tcc Ser 75	aac Asn	aca Thr	gcc Ala	tgg Trp	ctg Leu 80	240
cag Gln	ctc Leu	agc Ser	agc Ser	ctg Leu 85	aca Thr	tct Ser	gag Glu	gac Asp	act Thr 90	gcc Ala	gtc Val	tac Tyr	tac Tyr	tgt Cys 95	gca Ala	.288

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Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp Pro Lys Phe Gln
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Val Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Trp Leu
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Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys Ala
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 Ásp Arg Val Thr Ile Thr Cýs Lys Ála Ser Gln Ser Val Thr Asn Ásp
  gta gct tgg tac caa cag aag cca ggg cag tct cct aaa ctg ctg ata
                                                                     144
  Val Ála Trp Tyr Gln Gln Lys Pro Gly Gln Ser Pro Lys Leu Leu Ile
  tat tat gca tcc aat cgc tac act gga gtc cct gat cgc ttc act ggc
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  Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly
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Glu Asp Leu Ala Val Tyr Phe Cys Gln Gln Asp Tyr Ser Ser Pro Tyr
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Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg Phe Thr Gly
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Ser Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser Thr Val Gln Ala
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ccg ggt tcc tcc gtt aaa ctg tcc tgc aaa gct tcc ggt ttc aac atc
                                                                    144
Pro Gly Ser Ser Val Lys Leu Ser Cys Lys Ala Ser Gly Phe Asn Ile
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Lys Asp Thr Tyr Met His Trp Val Lys Gln Arg Pro Gly Gln Gly Leu
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gtt Val	cac His	tcc Ser	atc Ile 20	gtt Val	atg Met	acc Thr	cag Gln	tcc Ser 25	ccg Pro	gac Asp	tcc Ser	ctg Leu	gct Ala 30	gtt Val	tcc Ser	96
ctg Leu	ggt Gly	gaa Glu 35	cgt Arg	gtt <sup>.</sup> Val	acc Thr	atc Ile	aac Asn 40	tgc Cys	aaa Lys	gct Ala	tcc Ser	cag Gln 45	tcc Ser	gtt Val	acc Thr	144
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cag Gln	gct Ala	gaa Glu	gac Asp 100	gtt Val	gct Ala	gtt Val	tac Tyr	tac Tyr 105	tgc Cys	cag Gln	cag Gln	gac Asp	tac Tyr 110	tcc Ser	tcc Ser	336
	+	200	++~	aat	aat	aat	acc	aaa	cta	gag	atc	taa	gga	tcct	С	383
Pro	Tyr	Thr 115	Phe	Gly	Gly	Gly	Thr 120	Lys	Leu	Glu	Ile	*	<b>5</b> 5			
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<pre>Pro  &lt;21 &lt;21 &lt;21 &lt;21 &lt;40 Met 1</pre>	Tyr  0> 8 1> 1 2> P 3> H  0> 8 Gly	Thr 115 24 RT omo	Phe sapi Ser	Gly ens Cys 5	Gly	Gly	Thr 120 Leu	Lys	Leu Leu 10	Glu Val	Ile	* Thr	Ala	Thr	Gly	
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<pre></pre>	Tyr  0> 8 1> 1 2> P 3> H  0> 8 Gly His	Thr 115 24 RT omo Trp Ser	Sapi Ser Ile	Gly ens Cys 5 Val	<pre>Gly Ile Met</pre>	Gly Ile Thr	Thr 120 Leu	Lys Phe Ser 25	Leu 10 Pro	Val	Ile Ala	* Thr	Ala Ala 30	Thr 15 Val	Gly	
<pre>Pro  &lt;21 &lt;21 &lt;21 &lt;21 &lt;1 &lt;40 Met 1 Val Leu</pre>	Tyr  0 > 8 1 > 1 2 > P 3 > H 0 > 8 Gly His Gly Asp	Thr 115 24 RT omo Trp Ser Glu	Sapi Ser Ile 20 Arg	Gly ens Cys 5 Val	Ile Met Thr	Ile Thr Ile	Leu Gln Asn 40	Phe Ser 25 Cys	Leu 10 Pro	Val Asp	Ile Ala Ser	Thr Leu Gln 45	Ala Ala 30 Ser	Thr 15 Val	Gly Ser	
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gcc cac tcc cag gtc caa ctg cag gag agc ggt cca ggt ctt gtg aga
Ala His Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Arg
                                   25
cct agc cag acc ctg agc ctg acc tgc acc gtg tct ggc ttc aac att
                                                                      144
Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Asn Ile
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aaa gac acc tat atg cac tgg gtg aga cag cca cct gga cga ggt ctt
                                                                      192
Lys Asp Thr Tyr Met His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu
gag tgg att gga agg att gat cct gcg agt ggc gat act aaa tat gac
                                                                      240
Glu Trp Ile Gly Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp
ccg aag ttc cag gtc aga gtg aca atg ctg gta gac acc agc agc aac
                                                                      288
Pro Lys Phe Gln Val Arg Val Thr Met Leu Val Asp Thr Ser Ser Asn
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Thr Ala Trp Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
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tat tat tgt gca gac gga atg tgg gta tca acg gga tat gct ctg gac
                                                                       384
Tyr Tyr Cys Ala Asp Gly Met Trp Val Ser Thr Gly Tyr Ala Leu Asp
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 Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Asn Ile
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40

Lys Asp Thr Tyr Met His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu

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Glu Trp Ile Gly Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp
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Tyr Tyr Cys Ala Asp Gly Met Trp Val Ser Thr Gly Tyr Ala Leu Asp
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Ala His Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Arg
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cct agc cag acc ctg agc ctg acc tgc acc gtg tct ggc ttc aac att
Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Asn Ile
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Lys Asp Thr Tyr Met His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu
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Glu Trp Ile Gly Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp
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                                          7.5
                                                                    288
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Pro Lys Phe Gln Val Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn
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cag ttc agc ctg aga ctc agc agc gtg aca gcc gcc gac acc gcg gtc
                                                                    336
Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
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                                                                    384
tat tat tgt gca gac gga atg tgg gta tca acg gga tat gct ctg gac
Tyr Tyr Cys Ala Asp Gly Met Trp Val Ser Thr Gly Tyr Ala Leu Asp
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Lys Asp Thr Tyr Met His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu
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Glu Trp Ile Gly Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp
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Pro Lys Phe Gln Val Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn
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Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Asn Ile Lys Asp Thr
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                                                                    144
Tyr Met His Trp Val Arg Gln Pro Pro Gly Arg Gly Leu Glu Trp Ile
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                                                                    192
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 65
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                                                                   336
Ala Asp Gly Met Trp Val Ser Thr Gly Tyr Ala Leu Asp Phe Trp Gly
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Gln Val Arg Val Thr Met Leu Val Asp Thr Ser Ser Asn Gln Phe Ser
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                    70
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 Ala His Ser Gln Val Gln Leu Gln Glu Ser Gly Pro Gly Leu Val Arg
 cct agc cag acc ctg agc ctg acc tgc acc gtg tct ggc ttc aac att
 Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Asn Ile
          35
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gag tgg att gga agg att gat cct gcg agt ggc gat act aaa tat gac
                                                                   240
Glu Trp Ile Gly Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp
                                                                   288
ccg aag ttc cag gtc aga gtg aca atg ctg gta gac acc agc agc aac
Pro Lys Phe Gln Val Arg Val Thr Met Leu Val Asp Thr Ser Ser Asn
                 85
                                     90
                                                                   336
cag ttc agc ctg aga ctc agc agc gtg aca gcc gcc gac acc gcg gtc
Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
                                105
tat tat tgt gca gac gga atg tgg gta tca acg gga tat gct ctg gac
                                                                   384
Tyr Tyr Cys Ala Asp Gly Met Trp Val Ser Thr Gly Tyr Ala Leu Asp
                            120
ttc tgg ggc caa ggg acc acg gtc acc gtc tcc tca ggt gag tcc
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Pro Ser Gln Thr Leu Ser Leu Thr Cys Thr Val Ser Gly Phe Asn Ile
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                            40
Lys Asp Thr Tyr Met His Trp Val Lys Gln Arg Pro Gly Arg Gly Leu
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Glu Trp Ile Gly Arg Ile Asp Pro Ala Ser Gly Asp Thr Lys Tyr Asp
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                    70
Pro Lys Phe Gln Val Arg Val Thr Met Leu Val Asp Thr Ser Ser Asn
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                85
Gln Phe Ser Leu Arg Leu Ser Ser Val Thr Ala Ala Asp Thr Ala Val
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Tyr Tyr Cys Ala Asp Gly Met Trp Val Ser Thr Gly Tyr Ala Leu Asp
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cct Pro	agc Ser	cag Gln 35	acc Thr	ctg Leu	agc Ser	ctg Leu	acc Thr 40	tgc Cys	acc Thr	gcg Ala	tct Ser	ggc Gly 45	ttc Phe	aac Asn	att Ile	144
aaa Lys	gac Asp 50	acc Thr	tat Tyr	atg Met	cac His	tgg Trp 55	gtg Val	aga Arg	cag <sup>.</sup> Gln	cca Pro	cct Pro 60	gga Gly	cga Arg	ggt Gly	ctt Leu	192
gag Glu 65	tgg Trp	att Ile	gga Gly	agg Arg	att Ile 70	gat Asp	cct Pro	gcg Ala	agt Ser	ggc Gly 75	gat Asp	act Thr	aaa Lys	tat Tyr	gac Asp 80	240
ccg Pro	aag Lys	ttc Phe	cag Gln	gtc Val 85	aga Arg	gtg Val	aca Thr	atg Met	ctg Leu 90	gta Val	gac Asp	acc Thr	agc Ser	agc Ser 95	aac Asn	288
cag Gln	ttc Phe	agc Ser	ctg Leu 100	aga Arg	ctc Leu	agc Ser	agc Ser	gtg Val 105	aca Thr	gcc Ala	gcc Ala	gac Asp	acc Thr 110	gcg Ala	gtc Val	336
tat Tyr	tat Tyr	tgt Cys 115	gca Ala	gac Asp	gga Gly	atg Met	tgg Trp 120	gta Val	tca Ser	acg Thr	gga Gly	tat Tyr 125	gct Ala	ctg Leu	gac Asp	384
ttc Phe	tgg Trp 130	ggc Gly	caa Gln	ggg	acc Thr	acg Thr 135	gtc Val	acc Thr	gtc Val	tcc Ser	tca Ser 140	ggt Gly	gag Glu	tcc Ser		429

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gtt cac tcc gac atc cag ctg acc cag agc cca agc agc ctg agc gcc
                                                                    96
Val His Ser Asp Ile Gln Leu Thr Gln Ser Pro Ser Ser Leu Ser Ala
agc gtg ggt gac aga gtg acc atc acc tgt aag gcc agt cag agt gtg
                                                                    144
Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Ser Val
                              40
 act aat gat gta gct tgg tac cag cag aag cca ggt aag gct cca aag
                                                                    192
 Thr Asn Asp Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
 ctg ctg atc tac tat gca tcc aat cgc tac act ggt gtg cca agc aga
 Leu Leu Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg
 ttc agc ggt agc ggt acc gac ttc acc ttc acc atc agc agc
 Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
                                       90
 ctc cag cca gag gac atc gcc acc tac tac tgc cag cag gat tat agc
                                                                    336
 Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Asp Tyr Ser
             100
                                                                    384
 tct ccg tac acg ttc ggc caa ggg acc aag gtg gaa atc aaa cgt aag
 Ser Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Lys
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         115
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Thr Asn Asp Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
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Leu Leu Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Ser Arg
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Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
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gtc cac tcc agc atc gtg atg acc cag agc cca agc agc ctg agc gcc
Val His Ser Ser Ile Val Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
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agc gtg ggt gac aga gtg acc atc acc tgt aag gcc agt cag agt gtg
                                                                    144
Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Ser Val
 act aat gat gta gct tgg tac cag cag aag cca ggt aag gct cca aag
 Thr Asn Asp Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
 ctg ctg atc tac tat gca tcc aat cgc tac act ggt gtg cca gat aga
                                                                    240
 Leu Leu Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg
                                                                    288
 ttc agc ggt agc ggt tat ggt acc gac ttc acc ttc acc atc agc agc
 Phe Ser Gly Ser Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
 ctc cag cca gag gac atc gcc acc tac tac tgc cag cag gat tat agc
                                                                    336
 Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Asp Tyr Ser
 tet eeg tae aeg tte gge caa ggg ace aag gtg gaa ate aaa egt aag
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 Ser Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Lys
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Thr Asn Asp Val Ala Trp Tyr Gln Gln Lys Pro Gly Lys Ala Pro Lys
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Leu Leu Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg
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                                         75
Phe Ser Gly Ser Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
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                85
Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Asp Tyr Ser
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gtc cac tcc gac atc cag atg acc cag agc cca agc agc ctg agc gcc
                                                                    96
Val His Ser Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser Ala
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Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Ala Ser Gln Ser Val
act aat gat gta gct tgg tac cac cag aag cca ggt aag gct cca aag
                                                                    192
Thr Asn Asp Val Ala Trp Tyr His Gln Lys Pro Gly Lys Ala Pro Lys
ctg ctg atc tac tat gca tcc aat cgc tac act ggt gtg cca gat aga
                                                                    240
Leu Leu Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg
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ttc agc ggt agc ggt tat ggt acc gac ttc acc ttc acc atc agc agc
                                                                    288
Phe Ser Gly Ser Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
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ctc cag cca gag gac atc gcc acc tac tac tgc cag cag gat tat agc
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tct ccg tac acg ttc ggc caa ggg acc aag gtg gaa atc aaa cgt aag
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Ser Pro Tyr Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys Arg Lys
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Thr Asn Asp Val Ala Trp Tyr His Gln Lys Pro Gly Lys Ala Pro Lys
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Leu Leu Ile Tyr Tyr Ala Ser Asn Arg Tyr Thr Gly Val Pro Asp Arg
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                     70
Phe Ser Gly Ser Gly Tyr Gly Thr Asp Phe Thr Phe Thr Ile Ser Ser
                                     90
                 85
Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Asp Tyr Ser
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                                 25
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Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Gly Leu Glu Trp Val
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                                                 45
                             40
Gly Tyr Ile Asp Pro Phe Asn Gly Gly Thr Ser Tyr Asn Gln Lys Phe
                        55
                                             60
Lys Gly Lys Val Thr Met Thr Val Asp Thr Ser Thr Asn Thr Ala Tyr
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Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85
                                     90
Ala Arg Gly Gly Asn Arg Phe Ala Tyr Trp Gly Gln Gly Thr Leu Val
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                                 105
                                                     110
Thr Val Ser Ser
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ccg tct att cag ttc ctg ggg ctc ttg ttc tgg ctt cat ggt gct
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Pro Ser Ile Gln Phe Leu Gly Leu Leu Phe Trp Leu His Gly Ala

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cag Gln	tgt Cys 20	gac Asp	atc Ile	cag Gln	atg Met	aca Thr 25	cag Gln	tct Ser	cca Pro	tcc Ser	tca Ser 30	ctg Leu	tct Ser	gca Ala	tct Ser	154
ctg Leu 35	gga Gly	ggc Gly	aaa Lys	gtc Val	acc Thr 40	atc Ile	act Thr	tgc Cys	aag Lys	aca Thr 45	agc Ser	caa Gln	gac Asp	att Ile	aac Asn 50	202
aag Lys	tat Tyr	atg Met	gct Ala	tgg Trp 55	tac Tyr	caa Gln	cac His	aag Lys	cct Pro 60	gga Gly	aaa Lys	cgt Arg	cct Pro	agg Arg 65	ctg Leu	250
ctc Leu	ata Ile	cat His	tac Tyr 70	aca Thr	tct Ser	gca Ala	tta Leu	cag Gln 75	cca Pro	ggc Gly	atc Ile	cca Pro	tca Ser 80	agg Arg	ttc Phe	298
agt Ser	gga Gly	agt Ser 85	ĠŢÀ âââ	tct Ser	ggg Gly	aga Arg	gat Asp 90	tat Tyr	tcc Ser	ttc Phe	aac Asn	atc Ile 95	agc Ser	aac Asn	ctg Leu	346
gag Glu	cct Pro 100	gaa Glu	gat Asp	att Ile	gca Ala	act Thr 105	tat Tyr	tat Tyr	tgt Cys	cta Leu	cag Gln 110	tat Tyr	gat Asp	aat Asn	ctg Leu	394
tgg Trp 115	acg Thr	ttc Phe	ggt Gly	gga Gly	ggc Gly 120	acc Thr	aag Lys	ctg Leu	gaa Glu	atc Ile 125	.aaa Lys	cg (	ggct	gatg	ct	442
gcad	ccaa	ctg 1	tatc	catc	tt c	ccac	catc	c ac	ccgg	gatc	С					483
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	Ala	Gln	Cys 20	Asp	Ile	Gln	Met	Thr 25	Gln	Ser	Pro	Ser	Ser 30	Leu	Ser	
Ala	Ser	Leu 35		Gly	Lys	Val	Thr 40		Thr	Cys	Lys	Thr 45		Gln	Asp	
Ile		Lys	Tyr	Met	Ala	Trp 55		Gln	His	Lys	Pro 60		Lys	Arg	Pro	
_	50 Leu	Leu	Ile	His	Tyr		Ser	Ala	Leu	Gln 75		Gly	Ile	Pro	Ser 80	
65 Arg	Phe	Ser	Gly		70 Gly	Ser	Gly	Arg			Ser	Phe	Asn	Ile 95		
Asn	Leu	Glu			Asp	Ile	Ala		90 Tyr	Tyr	Cys	Leu	Gln 110	Tyr	Asp	
Asn	Leu	Trp 115			Gly	Gly	Gly 120		Lys	Leu	Glu	Ile 125	Lys			
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Page 20

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                                     10
gtc aat tca gag gtt cag ctg cag tct ggg gca gag ctt gtg aag
                                                                   96
Val Asn Ser Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys
cca ggg gcc tca gtc aag ttg tcc tgc aca gct tct ggc ttc aac att
                                                                   144
Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile
aaa gac acc tat ata cac tgt gtg aag cag agg cct gaa cag ggc ctg
                                                                   192
Lys Asp Thr Tyr Ile His Cys Val Lys Gln Arg Pro Glu Gln Gly Leu
gag tgg att gga agg att gat cct gcg aat ggt tat act aaa tat gac
                                                                   240
Glu Trp Ile Gly Arg Ile Asp Pro Ala Asn Gly Tyr Thr Lys Tyr Asp
                     70
ccg aag ttc cag ggc aag gcc act ata aca gct gac aca tcc tcc aac
Pro Lys Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn
aca gcc tac ctg cag ctc agc agc ctg aca tct gag gac act gcc gtc
                                                                   336
Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
            100
                                                                   384
tat ttc tgt gct aga gag gga tat tat ggt aac tac ggg gtc tat gct
Tyr Phe Cys Ala Arg Glu Gly Tyr Tyr Gly Asn Tyr Gly Val Tyr Ala
                             120
        115
                                                                   432
atg qac tac tgg ggt caa gga acc tca gtc acc gtc tcc tca gcc aaa
Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys
                                             140
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Val Asn Ser Glu Val Gln Leu Gln Gln Ser Gly Ala Glu Leu Val Lys
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Pro Gly Ala Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile
                             40
Lys Asp Thr Tyr Ile His Cys Val Lys Gln Arg Pro Glu Gln Gly Leu
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Glu Trp Ile Gly Arg Ile Asp Pro Ala Asn Gly Tyr Thr Lys Tyr Asp
Pro Lys Phe Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn
                                    90
                85
Thr Ala Tyr Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val
                                105
            100
Tyr Phe Cys Ala Arg Glu Gly Tyr Tyr Gly Asn Tyr Gly Val Tyr Ala
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Met Asp Tyr Trp Gly Gln Gly Thr Ser Val Thr Val Ser Ser Ala Lys
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            20
Met Ala Trp Tyr Gln His Lys Pro Gly Lys Arg Pro Arg Leu Leu Ile
        35
                            40
His Tyr Thr Ser Ala Leu Gln Pro Gly Ile Pro Ser Arg Phe Ser Gly
                                            60
Ser Gly Ser Gly Arg Asp Tyr Ser Phe Asn Ile Ser Asn Leu Glu Pro
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                    70
Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Asn Leu Trp Thr
                85
Phe Gly Gly Gly Thr Lys Leu Glu Ile Lys
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Leu Asn Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Lys Leu Leu Ile
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Tyr Glu Ala Ser Asn Leu Gln Ala Gly Val Pro Ser Arg Phe Ser Gly
                         55
Ser Gly Ser Gly Thr Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro
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Glu Asp Ile Ala Thr Tyr Tyr Cys Gln Gln Tyr Gln Ser Leu Pro Tyr
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Thr Phe Gly Gln Gly Thr Lys Leu Gln Ile Thr
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Met Ala Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro Arg Leu Leu Ile
                            40
His Tyr Thr Ser Ala Leu Gln Pro Gly Ile Pro Ser Arg Phe Ser Gly
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Ser Gly Ser Gly Arg Asp Tyr Thr Phe Thr Ile Ser Ser Leu Gln Pro
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Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp Asn Leu Trp Thr
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Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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Arg Ile Arg Val Glu Lys
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Ser Val Lys Leu Ser Cys Thr Ala Ser Gly Phe Asn Ile Lys Asp Thr
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                                25
Tyr Ile His Cys Val Lys Gln Arg Pro Glu Gln Gly Leu Glu Trp Ile
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Gly Arg Ile Asp Pro Ala Asn Gly Tyr Thr Lys Tyr Asp Pro Lys Phe
                       55
Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
                    70
                                        75
Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Phe Cys
                                    90
                8.5
Ala Arg Glu Gly Tyr Tyr Gly Asn Tyr Gly Val Tyr Ala Met Asp Tyr
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Gly Trp Ile Asn Ala Gly Asn Gly Asn Thr Lys Tyr Ser Gln Lys Phe
                        55
                                            60
Gln Gly Arg Val Thr Ile Thr Arg Asp Thr Ser Ala Ser Thr Ala Tyr
                    70
                                        75
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                8.5
                                    90
Ala Arg Gly Gly Tyr Tyr Gly Ser Gly Ser Asn Tyr Trp Gly Gln Gly
            100
                                105
Thr Leu Val Thr Val Ser Ser
      115
<210> 61
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Ser Val Lys Val Ser Cys Lys Ala Ser Gly Phe Asn Ile Lys Asp Thr
            20
                                25
Tyr Ile His Trp Val Arg Gln Ala Pro Gly Gln Arg Leu Glu Trp Met
                            40
Asx Arg Ile Asp Pro Ala Asn Gly Tyr Thr Lys Tyr Asp Pro Lys Phe
                        55
Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Ala Ser Thr Ala Tyr
                    70
                                        75
Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr Cys
                85
                                    90
Ala Arg Glu Gly Tyr Tyr Gly Asn Tyr Gly Val Tyr Ala Met Asp Tyr
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                                105
Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser
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Phe Asn Ile Lys Gly Ala
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Phe Asn Ile Lys Ala Phe

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Met Arg Pro Ser Ile Gln Phe Leu Gly Leu Leu Phe Trp Leu His

Gly Ala Gln Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser

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Ala Ser Val Gly Asp Arg Val Thr Ile Thr Cys Lys Thr Ser Gln Asp
                            40
Ile Asn Lys Tyr Met Ala Trp Tyr Gln Gln Thr Pro Gly Lys Ala Pro
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Arg Leu Leu Ile His Tyr Thr Ser Ala Leu Gln Pro Gly Ile Pro Ser
                    70
Arg Phe Ser Gly Ser Gly Ser Gly Arg Asp Tyr Thr Phe Thr Ile Ser
                                     90
                85
Ser Leu Gln Pro Glu Asp Ile Ala Thr Tyr Tyr Cys Leu Gln Tyr Asp
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Asn Leu Trp Thr Phe Gly Gln Gly Thr Lys Val Glu Ile Lys
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gtg gct cct ggg gcc cac agc cag gtg caa cta gtg cag tcc ggc gcc
                                                                    99
Val Ala Pro Gly Ala His Ser Gln Val Gln Leu Val Gln Ser Gly Ala
                              20
gaa gtg aag aaa ccc ggt gct tcc gtg aaa gtc agc tgt aaa gct agc
                                                                    147
Glu Val Lys Lys Pro Gly Ala Ser Val Lys Val Ser Cys Lys Ala Ser
 ggt ttc aac att aaa gac acc tat ata cac tgg gtt aga cag gcc cct
                                                                    195
 Gly Phe Asn Ile Lys Asp Thr Tyr Ile His Trp Val Arg Gln Ala Pro
                      50
 ggc caa agg ctg gag tgg atg gga agg att gat cct gcg aat ggt tat
 Gly Gln Arg Leu Glu Trp Met Gly Arg Ile Asp Pro Ala Asn Gly Tyr
                  65
 act aaa tat gac ccg aag ttc cag ggc cgg gtc acc atc acc gca gac
 Thr Lys Tyr Asp Pro Lys Phe Gln Gly Arg Val Thr Ile Thr Ala Asp
                                   85
 acc tot goo ago acc goo tac atg gaa ctg too ago ctg cgc too gag
                                                                     339
 Thr Ser Ala Ser Thr Ala Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu
                              100
 gac act gca gtc tac tac tgc gcc aga gag gga tat tat ggt aac tac
                                                                     387
 Āsp Thr Āla Val Tyr Tyr Cys Āla Arg Glu Gly Tyr Tyr Gly Asn Tyr
                          115
     110
 ggg gtc tat gct atg gac tac tgg ggt caa gga acc ctt gtc acc gtc
                                                                     435
 Gly Val Tyr Ala Met Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val
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125 130 135 140

tcc tca ggtgagtgga tcc . Ser Ser 454

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Xaa Ser Ile Ser Asn Tyr Leu Asn Trp Tyr Gln Gln Lys Pro Gly Lys
                            40
Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Glu Ser Gly Val
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Ala Pro Lys Leu Leu Ile Tyr Ala Ala Ser Ser Leu Glu Ser Gly Val
                    70
Pro Ser Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe Thr Leu Thr
                                    90
                85
Ile Ser Ser Leu Gln Pro Glu Asp Phe Ala Thr Tyr Tyr Cys Gln Gln
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                               105
Tyr Asn Ser Leu Pro Glu Trp Thr Phe Gly Gln Gly Thr Lys Val Glu
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Ile Lys
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                            40
 Gly Arg Ile Asp Pro Ala Asn Gly Asn Thr Lys Tyr Asp Pro Lys Phe
                                             60
                         55
 Gln Gly Lys Ala Thr Ile Thr Ala Asp Thr Ser Ser Asn Thr Ala Tyr
                                         75
                     70
 Leu Gln Leu Ser Ser Leu Thr Ser Glu Asp Thr Ala Val Tyr Tyr Cys
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                                     90
 Ala Arg Gly Tyr Tyr Tyr Asp Ser Xaa Val Gly Tyr Tyr Ala Met
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 Asp Tyr Trp Gly Gln Gly Thr Xaa Val Thr Val Ser Ser
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<213> Homo sapiens

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       35
Gly Trp Ile Asn Pro Tyr Gly Asn Gly Asp Thr Asn Tyr Ala Gln Lys
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Phe Gln Gly Arg Val Thr Ile Thr Ala Asp Thr Ser Thr Ser Thr Ala
                                        75
                    70
Tyr Met Glu Leu Ser Ser Leu Arg Ser Glu Asp Thr Ala Val Tyr Tyr
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                85
Cys Ala Arg Ala Pro Gly Tyr Gly Ser Gly Gly Cys Tyr Arg Gly
                                                    110
                                105
            100
Asp Tyr Xaa Phe Asp Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser
                            120
        115
Ser
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